



STATEMENT OF BASIS

Cheney Lime and Cement
Alabaster, Alabama
Shelby County
Facility No. 411-0019

This proposed Title V Major Source Operating Permit renewal is issued under the provisions of ADEM Admin. Code r. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans, and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

RENEWAL NOTES

1. On January 5, 2004, 40 CFR 60, Subpart AAAAA, "*National Emissions Standards for Hazardous Air Pollutants for Lime Manufacturing Facilities*" was promulgated. The applicable requirements associated with Subpart AAAAA have been addressed in this document.
2. On May 15, 2008, the Department issued Air Permit No. 411-0019-X004 for the replacement of the existing lime hydrator wet scrubber with a baghouse. The renewal MSOP will incorporate this source and all applicable requirements contained within the permit.
3. On September 30, 2008, revisions to ADEM Administrative Code r. 335-3-4-.01, "Visible Emissions" became effective. The requirements of this regulation are included in the renewal MSOP.
4. On April 28, 2009, revisions to 40 CFR 60, Subpart OOO, "*Standards of Performance for Nonmetallic Mineral Processing Plants*" were promulgated. These revisions, and any applicable requirements associated with them, have been addressed in this document.
5. On October 8, 2009, revisions to 40 CFR 60, Subpart Y, "*Standards of Performance for Coal Preparation and Processing Plants*" were promulgated. These revisions, and any applicable requirements associated with them, have been addressed in this document.

FACILITY DESCRIPTION

Cheney Lime and Cement Company (hereinafter, "Cheney") operates an existing limestone quarrying and lime manufacturing facility located in Alabaster, Shelby County, Alabama. This plant is known as the Landmark Plant. Contrary to the company name, the Landmark Plant does not produce cement. The manufacturing process involves several steps including quarrying, crushing, calcining, hydrating, transfer, storage, and handling operations. The plant is comprised of the following processes:

- No. 1 Lime Kiln w/Baghouse
- Lime Hydrator Plant w/Baghouse
- No. 2 Rotary Lime Kiln w/ Preheater and Baghouse
- Lime Crushing & Screening Station w/Baghouse
- No. 2 Lime Kiln Dust Bin w/ Loadout & Baghouse
- No. 1 Lime Kiln Dust Bin w/ Loadout & Baghouse
- No. 1 & No. 2 Lime Systems w/common Baghouse

The facility is a major source of Particulate Matter (PM), Sulfur Dioxide (SO₂), Nitrogen Oxides (NO_x), and Carbon Monoxide (CO) emissions. Additionally, Cheney is a synthetic minor source of Hazardous Air Pollutants (HAP) and a true minor source of Volatile Organic Compound (VOC) emissions.

Cheney currently holds Major Source Operating Permit (MSOP) No. 411-0019 which was initially issued on January 4, 2000, and renewed on January 4, 2007. The MSOP renewal application was due to the Department by July 3, 2010, and was received by the Department on January 30, 2009.

No. 1 Lime Kiln with Baghouse

Processed limestone is fed to the kiln from the stone plant. Calcination of limestone occurs in the kiln as a result of heat produced by the combustion of pulverized coal and coke. The resulting product, known as *quicklime*, is air cooled and conveyed into Lime System No. 1.

Kiln exhaust gases are routed through an “M-tube” cooler/heat exchanger prior to entering a baghouse. Emissions from this source are monitored via a Continuous Opacity Monitoring System (COMS).

This area is comprised of the following source:

| Emission Point # | Description |
|------------------|-------------------------------|
| 001 | No. 1 Lime Kiln with Baghouse |

- This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permits"*.
- This source is subject to ADEM Admin. Code r. 335-3-4-.04 (1), *"Control of Particulate Emissions for Process industries – General"*.
- This source is subject to ADEM Admin. Code r. 335-3-4-.01 (1), *"Control of Particulate Emissions – Visible Emissions"*.
- This source has enforceable limits in place in order to prevent it from being subject to the provisions of 40 CFR 63 Subpart AAAAA, *"National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants."*
- The Lime Kiln is subject to 40 CFR 64, *"Compliance Assurance Monitoring."* Pre-control potential particulate matter emissions exceed 100 TPY.

Emission Standards:

- Opacity
 - ADEM Admin Code r. 335-4-.01(3-5), states no person shall discharge particulate emissions of an opacity greater than twenty (20%) percent opacity, as determined by a six (6) minute average, except that during each calendar quarter, the permittee may discharge into the atmosphere from the stack particulate with an opacity exceeding 20% for not more than 24 60-minute period of any calendar day, if such periods do not exceed 2.0% of the source calendar quarter operating hours for which opacity standard is applicable and for which the COMS is indicating valid data.
 - The permittee shall not discharge into the atmosphere from the baghouse exhaust particulate emissions of an opacity greater than 22% averaged over each calendar day (ADEM Admin Code r. 335-4-.01(3-5)).
- Particulate Matter
 - ADEM Admin Code r. 335-3-4-.04(1) states no person shall cause or permit emission of particulate matter in excess of the amount for the process weight per hour allocated to such source accomplished by use of the equation:

$$E = 3.59 (P)^{0.62} \text{ (P less than 30 tons per hour)}$$

$$E = 17.31 (P)^{0.16} \text{ (P greater than 30 tons per hour)}$$

Where E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

The No. 1 Lime Kiln shall not discharge to the atmosphere particulate matter emissions in excess of the emissions determined by ADEM Admin Code r. 335-3-4-.04(1), "*Process Weight Equation*". The PM maximum allowable for this unit would be 30.9 lbs/hr.

- Hazardous Air Pollutants
 - The Lime Kiln shall not discharge to the atmosphere HCl emissions in excess of 0.057 lb/ton of lime produced.
 - The Permittee shall not discharge to the atmosphere any single HAP in excess of 9.9 TPY or any combination of total HAPs in excess of 24.5 TPY from both kilns.

40 CFR 63 (MACT avoidance 40 CFR 63 Subpart AAAAA)

EXPECTED EMISSIONS:

| Pollutant | Allowable Emissions | | Expected Emissions | |
|-------------------|---------------------|-------|--------------------|-------|
| | (lb/hr) | (TPY) | (lb/hr) | (TPY) |
| PM | 30.9 | 135.3 | 3.84 | 6.6 |
| PM ₁₀ | N/A* | N/A* | 2.11 | 3.63 |
| PM _{2.5} | N/A* | N/A * | 1.04 | 1.78 |
| SO ₂ | N/A* | N/A* | 30.2 | 72.1 |
| NO _x | N/A* | N/A* | 55 | 119 |
| CO | N/A* | N/A* | 26.6 | 63.6 |
| VOC | N/A * | N/A * | 0.36 | 0.91 |
| HCl | 1.01 | 0.54 | .54 | 1.7 |

*There are no applicable emissions standards for this pollutant.

Compliance and Performance Test Methods and Procedures:

- Particulate Matter (PM) emissions test shall be conducted in accordance with Method 5 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).
- Sulfur Dioxide emissions test shall be conducted in accordance with Method 6 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).
- Nitrogen Oxide emissions test shall be conducted in accordance with Method 7 or 7E of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).
- Carbon Monoxide emissions test shall be conducted in accordance with Method 10 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).
- Visible emission observations (VEO) shall be conducted in accordance with Method 9 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).
- Emissions of HCl shall be determined by an EPA-approved reference method as stated in 40 CFR 63, Subpart AAAAA (40 CFR 63, Subpart AAAAA).

Emission Monitoring:

- The Permittee shall conduct a particulate matter emissions test for the Lime Kiln annually, at intervals not to exceed 12 months. (ADEM Admin. Code r. 335-3-16-.05(c))

Cam Analysis:

- CAM is applicable to the Lime Kiln for particulate matter, since the kiln has the pre-controlled potential to emit particulate matter emissions greater than 100 TPY, and a baghouse is used to control emissions from the kiln. All other pollutants from the kiln are not emitted in quantities greater than the major source threshold, nor is the kiln meeting a limit via a control device for any other pollutant. Therefore, CAM does not apply to any other pollutant for the Lime Kiln.

During the first MSOP renewal (*issued January 4, 2007*), the facility established a CAM plan for this source. The established monitoring plan ensures compliance with applicable emissions standards through three indicators: opacity, baghouse inspections, and particulate matter emissions tests.

The opacity of emissions exiting the baghouse is measured continuously via a Continuous Opacity Monitoring System (COMS). The COMS is required to be calibrated and maintained in accordance with manufacturer specifications and 40 CFR 60.13 and Performance Specification No. 1 (PS-1) of 40 CFR 60, Appendix B.

Baghouse and bag conditions are observed through quarterly maintenance inspections. These inspections may include, but may not be limited to the following: bag wear, auger load, doors seals, exterior condition, etc.

A particulate matter (PM) emissions test, performed in accordance with Method 5 of 40 CFR 60, Appendix A must be performed on an annual basis. Consecutive tests shall not be conducted less than 6 months or more than 18 months apart.

The CAM plan for this source is included in Appendix A

Recordkeeping and Reporting Requirements:

- A written report of the excess opacity emissions, as defined below, will be submitted to the Department for each calendar quarter within the month following the end of the quarter. The report will include the following information (40 CFR 60.65):
 - The magnitude of excess emissions over 15% computed from 6-minute averages (data recorded during period of opacity monitoring system breakdowns, repairs, calibration checks, span adjustments, and zero shall not be included in the data averages).
 - The date and time of commencement and completion of each time period of excess emissions.

- The nature and cause of the excess emissions (if known) and the corrective action taken or preventative measures adopted.
- The date and time identifying each period during which the opacity monitoring system was inoperative (except for zero and span checks) and the nature of the system repairs or adjustments.
- When no excess emissions have occurred and the opacity monitoring system was not inoperative or did not required repairs or adjustments, such information will be stated in the report.
- All the original data charts, performance evaluations, calibration checks, adjustments, maintenance records, and other information regarding the opacity monitoring system will be maintained in a permanent form suitable for inspection. (ADEM Admin. Code r. 335-3-16-.05(c))
- Records of the causes of excess opacity (as determined by the COMS) and corrective measures utilized to alleviate emissions. (ADEM Admin. Code r. 335-3-16-.05(c))
- Records of baghouse and any maintenance performed. (ADEM Admin. Code r. 335-3-16-.05(c))
- The permittee shall maintain records and submit reports for monitoring required by the CAM section of this permit. These records and reports shall be maintained on site in a form suitable for inspection for a period of at least 5 years.

Lime Hydrator Plant with Baghouse

On February 22, 2008, the Department received air permit application forms for the proposed replacement of the existing lime hydrator wet scrubber with a baghouse. The project also included the proposed installation of a 2.5 MMBtu/hr natural gas fired burner. Air Permit No. 411-0019-X004 was issued for the proposed project on May 15, 2008.

Cheney operates one lime hydrator plant. Quicklime that is produced in the kilns is fed via a screw conveyor and bucket elevator to an enclosed hydrator unit where the lime is blended with water to convert CaO to hydrated lime (Ca(OH)₂). The hydrated lime is then conveyed to four (4) storage silos.

This area is comprised of the following source:

| Emission Point # | Description |
|------------------|-----------------------------------|
| 004 | Lime Hydrator Plant with Baghouse |

- This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *“Major Source Operating Permits”*.
- This source is subject to ADEM Admin. Code r. 335-3-4-.04 (1), *“Control of Particulate Emissions for Process industries – General”*.
- This source is subject to ADEM Admin. Code r. 335-3-4-.01 (1), *“Control of Particulate Emissions – Visible Emissions”*.
- This source has enforceable limits in place in order to prevent it from being subject to the provisions of ADEM Admin. Code r. 335-3-14-.04, *“Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”*.

Emission Standards:

- Opacity
 - ADEM Admin Code r. 335-4-.01(1)(a)(b), states no person shall discharge particulate emissions of an opacity greater than that designated as twenty (20%) percent opacity, as determined by a six (6) minute average. During on six (6) minute period a person may discharge into the atmosphere from any source of forty (40%) percent opacity.
- Particulate Matter
 - PM from this source shall not exceed the lesser of the BACT limit of 3.0 lb/hr as required by ADEM Admin. Code r. 335-3-14-.04

OR

the allowable set by ADEM Admin Code r. 335-3-4-.04(1), which states no person shall cause or permit the emission of particulate matter in excess of the amount for the process weight per hour allocated to such source accomplished by use of the equation:

$$E = 3.59 (P)^{0.62} \text{ (P less than 30 tons per hour)}$$

$$E = 17.31 (P)^{0.16} \text{ (P greater than 30 tons per hour)}$$

Where E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

EXPECTED EMISSIONS:

| Pollutant | Allowable Emissions lb/hr | Expected Emissions | |
|-----------------|------------------------------|--------------------|----------|
| | | (lb/hr) | (ton/yr) |
| PM | 3.0 | 0.019 | 0.083 |
| SO ₂ | N/A* | .002 | 0.007 |
| NO _x | N/A* | 0.250 | 1.095 |
| CO | N/A* | .210 | .920 |
| VOC | N/A* | 0.014 | 0.060 |

*There are no applicable emissions standards for this pollutant.

Compliance and Performance Test Methods and Procedures:

- Particulate Matter (PM) emissions test shall be conducted in accordance with Method 5 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).
- Visible emission observations (VEO) shall be conducted in accordance with Method 9 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).

Emission Monitoring:

- The Permittee shall conduct a visual check of the baghouse stack associated with the Lime Hydrator at least once per week while the source is in operation. If the instantaneous opacity noted exceeds ten (10%) percent opacity, a visible emissions observation (VEO) shall be conducted within **thirty (30) minutes** of the initial observation in accordance with Method 9 of 40 CFR 60, Appendix A, for a minimum of twelve (12) minutes.
- If the average opacity observed during the Method 9 VEO exceeds ten (10%) percent opacity, as determined by a six (6) minute average, corrective action shall be initiated within **two (2) hours** in order to reduce any visible emissions.
- If any Method 9 VEO results in a six (6) minute average greater than twenty (20%) percent opacity, the Permittee shall notify the Department within **twenty-four (24) hours**, or one (1) working day, of the VEO.
- A properly maintained and operated device shall be utilized to measure the pressure differential (ΔP) across the baghouse. Each device shall be located at eye level and be easily accessible for inspections by Air Division and plant personnel.
- Pressure drop (ΔP) across the baghouse shall be monitored and recorded daily while the unit is in operation.
- If the observed pressure drop (ΔP) is less than two and one-half (2.5) inches of water or greater than eleven (11) inches of water, corrective action shall be initiated within two (2) hours.
- The Permittee shall perform baghouse inspections/maintenance at least once per calendar quarter.
- Only natural gas shall be utilized in the burner. Any plans to change the type of burner fuel must receive prior approval from this office.

Cam Analysis:

- CAM does not apply to the lime hydrator plant since the unit does not have the pre-controlled potential to emit particulate matter emissions in quantities greater than the major source threshold.

Recordkeeping and Reporting Requirements:

- Records of all visible emissions checks, Method 9 test, pressure drop readings taken, corrective actions taken, and baghouse inspections/maintenance shall be kept on site in a form suitable for inspection for a period of at least 5 years.

No. 2 Lime Kiln with Preheater and Baghouse

Processed limestone is fed via hydraulic plungers to a counter flow preheater that draws kiln exit gases through the stone bed preheating the stone as it is fed. From the preheater, the stone enters the rotary kiln where calcination of limestone occurs in the kiln as a result of heat produced by the combustion of pulverized coal and coke. The resulting product, known as *quicklime*, is air cooled and conveyed into Lime System No. 2.

Kiln exhaust gases are routed through a baghouse equipped with a Continuous Opacity Monitoring System (COMS).

This area is comprised of the following source:

| Emission Point # | Description |
|------------------|---|
| 005 | No. 2 Lime Kiln with Preheater and Baghouse |

- This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *"Major Source Operating Permits"*.
- This source is subject to ADEM Admin. Code r. 335-3-4-.04 (1), *"Control of Particulate Emissions for Process industries – General"*.
- This source is subject to the applicable requirements of 40 CFR 60 Subpart HH, *"Standard of Performance for Lime Manufacturing Plants."*
- This source has enforceable limits as a result of a review under the provisions of ADEM Admin. Code R. 335-3-14-.04, *"Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]"*.
- This source has enforceable limits in place in order to prevent it from being subject to the provisions of 40 CFR 63 Subpart AAAAA, *"National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants."*
- This source is subject to 40 CFR 64, *"Compliance Assurance Monitoring."* Pre-control potential particulate matter emissions exceed 100 TPY.

Emission Standards:

- Opacity
 - Visible emissions (VE) discharged from the Lime Kiln shall not exceed 15%, as determined by a 6-minute average as required by §60.342(a)(2) of 40 CFR 60 Subpart HH. (*§60.342(a)(2) Subpart HH*)
- Particulate Matter
 - ADEM Admin Code r. 335-3-4-.04(1) states no person shall cause or permit emission of particulate matter in excess of the amount for the process weight per hour allocated to such source accomplished by use of the equation:

$$E = 3.59 (P)^{0.62} \text{ (P less than 30 tons per hour)}$$

$$E = 17.31 (P)^{0.16} \text{ (P greater than 30 tons per hour)}$$

Where E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

The No. 2 Kiln is subject to the applicable particulate matter emissions standards contained within 40 CFR 60, Subpart HH. In addition, this source is subject to a BACT limit implemented in accordance with ADEM Admin Code r. 335-3-14-.04. Therefore, since this source is subject to 40 CFR 60, Subpart HH, which is a more stringent PM emissions standard, this regulation would be superseded.

- The No. 2 Lime Kiln (005) shall not discharge to the atmosphere particulate emissions in excess of 0.6 lb/ton of feed. (*§60.342(a)(1) Subpart HH*)
- The No. 2 Lime Kiln (005) shall not discharge to the atmosphere particulate emissions in excess of 0.02 gr/acf and 25.71 lb/hr. (*ADEM Admin. Code r. 335-3-14-.04.) BACT*)
- Sulfur Dioxide
 - The sulfur content of the fuel blend delivered to the No. 2 Lime Kiln (005) burner shall not exceed 3.03%. (*ADEM Admin. Code r. 335-3-14-.04) BACT*)
 - The No. 2 Lime Kiln's sulfur dioxide removal efficiency, based on comparison of sulfur dioxide emitted to the conversion of all inlet fuel sulfur dioxide, shall be 93% or greater, and the maximum sulfur dioxide emission rate shall not exceed 42.42 lb/hr. (*ADEM Admin. Code r. 335-3-14-.04) BACT*)

- Nitrogen Oxides
 - The nitrogen oxide emissions from the No. 2 Lime Kiln shall not exceed 2.8 lb/ton of lime produced and 70.0 lb/hr. (ADEM Admin. Code r. 335-3-14-.04) *BACT*
- Carbon Monoxide
 - The carbon monoxide emissions from the No. 2 Lime Kiln shall not exceed 2.0 lb/ton of lime produced and 50.0 lb/hr. (ADEM Admin. Code r. 335-3-14-.04) *BACT*
- Hazardous Air Pollutants
 - The No. 2 Lime Kiln shall not discharge to the atmosphere HCl emissions in excess of 0.072 lb/ton of lime produced. (MACT avoidance)
 - The Permittee shall not discharge to the atmosphere any single HAP in excess of 9.9 TPY or any combination of total HAPs in excess of 24.5 TPY from both kilns. (MACT avoidance)

EXPECTED EMISSIONS:

| Pollutant | Allowable Emissions | | Expected Emissions | |
|-------------------|---------------------|-------|--------------------|-------|
| | (lb/hr) | (TPY) | (lb/hr) | (TPY) |
| PM | 15 | 65.7 | 5.85 | 11.9 |
| PM ₁₀ | N/A* | N/A* | 3.22 | 6.50 |
| PM _{2.5} | N/A* | N/A * | 1.58 | 3.20 |
| SO ₂ | 42.42 | 186 | 4.53 | 115 |
| NO _x | 70.0 | 307 | 30.8 | 209 |
| CO | 50.0 | 219 | 24.2 | 112 |
| VOC | N/A* | N/A * | 0.30 | 1.31 |
| HCl | 1.80 | 7.88 | 0.304 | 1.30 |

*There are no applicable emissions standards for this pollutant.

Compliance and Performance Test Methods and Procedures:

- Particulate Matter (PM) emissions test shall be conducted in accordance with Method 5 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).
- Sulfur Dioxide emissions test shall be conducted in accordance with Method 6 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-6-.05).

- Nitrogen Oxide emissions test shall be conducted in accordance with Method 7 or 7E of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).
- Carbon Monoxide emissions test shall be conducted in accordance with Method 10 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).
- Visible emission observations (VEO) shall be conducted in accordance with Method 9 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).
- Emissions of HCl shall be determined by an EPA-approved reference method as stated in 40 CFR 63, Subpart AAAAA (40 CFR 63, Subpart AAAAA).

Emission Monitoring:

- The Permittee shall conduct a particulate matter emissions test for the Lime Kiln annually, at intervals not to exceed 12 months. (ADEM Admin. Code r. 335-3-16-.05(c))
- Samples of the coal and coke processed will be collected at least once per shift. A composite sample will be prepared by mixing together all of the samples taken during a week. Analyses of these composite samples shall be performed weekly and, in addition, shall be averaged monthly. (ADEM Admin. Code r. 335-3-14-.04) *BACT*
- Carbon Monoxide and Nitrogen Oxides emissions tests are to be conducted at least once before this Permit is renewed. During these emissions tests, the maximum fuel firing rates and minimum O₂ (1-hour averaging period) levels shall be recorded. (ADEM Admin. Code r. 335-3-16-.05(c))
- The Permittee shall monitor the fuel firing rate (1-hour average) and the O₂ level (1-hour average) of this source during all times of kiln operation. (ADEM Admin. Code r. 335-3-16-.05(c))
- If the fuel firing rate exceeds 110% of the fuel firing rate, as measured during the most recent CO and NO_x emissions tests, which demonstrated compliance with the applicable standards, the fuel feed rate shall be lowered and this unit shall have additional CO and NO_x emissions testing at the higher fuel firing rate. (ADEM Admin. Code r. 335-3-16-.05(c))
- If the O₂ level (1-hour averaging period) is measured as less than 75% of the lowest O₂ (1-hour averaging period) rate as measured during the most recent CO and NO_x tests which demonstrated compliance with the applicable standards, the owner or operator shall investigate the cause and take appropriate action. (ADEM Admin. Code r. 335-3-16-.05(c))

Cam Analysis:

- CAM is applicable to the Lime Kiln for particulate matter, since the kiln has the pre-controlled potential to emit particulate matter emissions greater than 100 TPY, and a baghouse is used to control emissions from the kiln. All other pollutants from the kiln are not emitted in quantities greater than the major source threshold, nor is the kiln meeting a limit via a control device for any other pollutant. Therefore, CAM does not apply to any other pollutant for the Lime Kiln.

During the first MSOP renewal (*issued January 4, 2007*), the facility established a CAM plan for this source. The established monitoring plan ensures compliance with applicable emissions standards through three indicators: opacity, baghouse inspections, and particulate matter emissions tests.

The opacity of emissions exiting the baghouse is measured continuously via a Continuous Opacity Monitoring System (COMS). The COMS is required to be calibrated and maintained in accordance with manufacturer specifications and 40 CFR 60.13 and Performance Specification No. 1 (PS-1) of 40 CFR 60, Appendix B.

Baghouse and bag conditions are observed through quarterly maintenance inspections. These inspections may include, but may not be limited to the following: bag wear, auger load, doors seals, exterior condition, etc.

A particulate matter (PM) emissions test, performed in accordance with Method 5 of 40 CFR 60, Appendix A must be performed on an annual basis. Consecutive tests shall not be conducted less than 6 months or more than 18 months apart.

The CAM plan for this source is included in Appendix A.

Recordkeeping and Reporting Requirements:

- A written report of the excess opacity emissions, as defined below, will be submitted to the Department for each calendar quarter within the month following the end of the quarter. The report will include the following information (40 CFR 60.65):
 - The magnitude of excess emissions over 15% computed from 6-minute averages (data recorded during period of opacity monitoring system breakdowns, repairs, calibration checks, span adjustments, and zero shall not be included in the data averages).
 - The date and time of commencement and completion of each time period of excess emissions.
 - The nature and cause of the excess emissions (if known) and the corrective action taken or preventative measures adopted.
 - The date and time identifying each period during which the opacity monitoring system was inoperative (except for zero and span checks) and the nature of the system repairs or adjustments.

- When no excess emissions have occurred and the opacity monitoring system was not inoperative or did not required repairs or adjustments, such information will be stated in the report.
- All the original data charts, performance evaluations, calibration checks, adjustments, maintenance records, and other information regarding the opacity monitoring system will be maintained in a permanent form suitable for inspection. (ADEM Admin. Code r. 335-3-16-.05(c))
- Records of the causes of excess opacity (as determined by the COMS) and corrective measures utilized to alleviate emissions. (ADEM Admin. Code r. 335-3-16-.05(c))
- Records of baghouse and any maintenance performed. (ADEM Admin. Code r. 335-3-16-.05(c))
- The permittee shall maintain records and submit reports for monitoring required by the CAM section of this permit. These records and reports shall be maintained on site in a form suitable for inspection for a period of at least 5 years. (ADEM Admin. Code r. 335-3-16-.05(c))
- Records of the weekly fuel sulfur content analyses and monthly averages of weekly fuel sulfur content analyses will be maintained in a form suitable for inspection. Any weekly fuel sulfur analysis in excess of 3.03% sulfur shall be reported to the Department within 24 hours of discovery. (ADEM Admin. Code r. 335-3-14-.04) *BACT*
- Records shall be maintained which document the maximum fuel firing rate (1-hour average) and the minimum O₂ level 1-hour average for each day Kiln 2 (005) operates. (ADEM Admin. Code r. 335-3-16-.05(c))
- The permittee shall maintain records and submit reports for monitoring required by CAM Section of this permit. These records and report shall be maintained on site in a form suitable for inspection for a period of at least 5 years.

Lime Crushing and Screening Station with Baghouse

Quicklime from the No. 2 Lime Kiln is discharged from the cooler. Next, it is processed through the Lime Crushing and Screening Station (006) for the purpose of sizing the quicklime product for storage and bulk loadout. This system consists of two belt conveyors, two bucket elevators, a roll crusher, screen and screen conveyor. The Lime Crushing and Screening Station is controlled by a baghouse.

This area is comprised of the following source:

| Emission Point # | Description |
|------------------|---|
| 006 | Lime Crushing and Screening Station with Baghouse |

- This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *“Major Source Operating Permits”*.
- This source is subject to ADEM Admin. Code r. 335-3-4-.04 (1), *“Control of Particulate Emissions for Process industries – General”*.
- This source is subject to ADEM Admin. Code r. 335-3-4-.01 (1), *“Control of Particulate Emissions – Visible Emissions”*.
- This source has enforceable limits as a result of a review under the provisions of ADEM Admin. Code R. 335-3-14-.04, *“Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”*.

Emission Standards:

- Opacity
 - ADEM Admin Code r. 335-4-.01(1)(a)(b), states no person shall discharge particulate emissions of an opacity greater than that designated as twenty (20%) percent opacity, as determined by a six (6) minute average. During on six (6) minute period a person may discharge into the atmosphere from any source of forty (40%) percent opacity.
- Particulate Matter
 - PM from this source shall not exceed the lesser of the BACT limit of 0.02 gr/scf (0.94 lb/hr) as required by ADEM Admin. Code r. 335-3-14-.04

OR

the allowable set by ADEM Admin Code r. 335-3-4-.04(1), which states no person shall cause or permit the emission of particulate matter in excess of the amount for the process weight per hour allocated to such source accomplished by use of the equation:

$$E = 3.59 (P)^{0.62} \text{ (P less than 30 tons per hour)}$$

$$E = 17.31 (P)^{0.16} \text{ (P greater than 30 tons per hour)}$$

Where E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

Expected Emissions:

The maximum expected emissions, per the applications submitted, are as follows:

| Pollutant | Allowable Emissions | | Expected Emissions | |
|-----------|---------------------|-------|--------------------|-------|
| | (lb/hr) | (TPY) | (lb/hr) | (TPY) |
| PM | 0.94 | 4.13 | 0.2 | 0.88 |

Compliance and Performance Test Methods and Procedures:

- Particulate Matter (PM) emissions test shall be conducted in accordance with Method 5 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).
- Visible emission observations (VEO) shall be conducted in accordance with Method 9 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).

Emission Monitoring:

- The Permittee shall conduct a visual check of the baghouse exhaust at least once per week. If any visible emissions are noted, corrective action shall be initiated within 2 hours of the initial observation of visible emissions in order to eliminate the visible emissions (ADEM Admin. Code r. 335-3-16-.05(c))
- Baghouse preventative maintenance inspections shall be performed at least once per quarter. The preventative maintenance shall include, but may not be limited to (ADEM Admin. Code r. 335-3-16-.05(c)):
 - A Visual inspections of the positive side of the bags through the maintenance port for fallen bags, worn or torn bags;
 - Visual inspections for auger overload;
 - Visual inspections of baghouse doors to ensure proper seals.
- A reading of the differential pressure across the baghouse shall be taken and recorded at least once per day during system operation. Should it be noted that the differential pressure across the baghouse is lower than 3 inches of water, corrective action shall be initiated within 1 hour of discovery to ensure proper operation of the baghouse. (ADEM Admin. Code r. 335-3-16-.05(c))
- To ensure the proper operation of the magnehelic gauge, which provides the baghouse differential pressure readings, maintenance inspections shall be performed at least once per quarter. These quarterly inspections shall include (but may not be limited to) checks of the pressure taps to ensure that there is no plugging/build-up, which would adversely affect the differential pressure reading. (ADEM Admin. Code r. 335-3-16-.05(c))

Cam Analysis:

- CAM does not apply to the lime crushing and screening station since this unit does not have the pre-controlled potential to emit particulate matter emissions in quantities greater than the major source threshold.

Recordkeeping and Reporting Requirements:

- Records of all visual checks, Method 9 tests performed, corrective actions taken, and follow-up visual checks shall be maintained in a form suitable for inspection on site for a period of at least 5 years. (ADEM Admin. Code r. 335-3-16-.05(c))
- Records of the pressure drop readings, magnehelic gauge maintenance inspections (and maintenance performed), and any corrective actions taken. These records shall be maintained on site in a form suitable for inspection for a period of at least 5 years. (ADEM Admin. Code r. 335-3-16-.05(c))

No. 2 Lime Kiln Dust Bin with Loadout and Baghouse

Lime kiln dust from the No. 2 Lime Kiln is transferred and stored in the No. 2 Lime Kiln Dust Bin with Loadout. The loadout transports dust into enclosed trucks. The No. 2 Lime Kiln Dust Bin is controlled by a baghouse.

This area is comprised of the following source:

| Emission Point # | Description |
|------------------|--------------------------|
| 007 | No. 2 Lime Kiln Dust Bin |

- This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *“Major Source Operating Permits”*.
- This source is subject to ADEM Admin. Code r. 335-3-4-.04 (1), *“Control of Particulate Emissions for Process industries – General”*.
- This source is subject to ADEM Admin. Code r. 335-3-4-.01 (1), *“Control of Particulate Emissions – Visible Emissions”*.
- This source has enforceable limits as a result of a review under the provisions of ADEM Admin. Code R. 335-3-14-.04, *“Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”*.

Emission Standards:

- Opacity
 - ADEM Admin Code r. 335-4-.01(1)(a)(b), states no person shall discharge particulate emissions of an opacity greater than that designated as twenty (20%) percent opacity, as determined by a six (6) minute average. During on six (6) minute period a person may discharge into the atmosphere from any source of forty (40%) percent opacity.
- Particulate Matter
 - PM from this source shall not exceed the lesser of the BACT limit of 0.02 gr/scf as required by ADEM Admin. Code r. 335-3-14-.04

OR

the allowable set by ADEM Admin Code r. 335-3-4-.04(1), which states no person shall cause or permit the emission of particulate matter in excess of the amount for the process weight per hour allocated to such source accomplished by use of the equation:

$$E = 3.59 (P)^{0.62} \text{ (P less than 30 tons per hour)}$$

$$E = 17.31 (P)^{0.16} \text{ (P greater than 30 tons per hour)}$$

Where E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

Expected Emissions:

The maximum expected emissions, per the applications submitted, are as follows:

| Pollutant | Allowable Emissions | Expected Emissions | |
|-----------|---------------------|--------------------|-------|
| | | (lb/hr) | (TPY) |
| PM | 0.02 gr/scf | 0.34 | 1.5 |

Compliance and Performance Test Methods and Procedures:

- Particulate Matter (PM) emissions test shall be conducted in accordance with Method 5 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).
- Visible emission observations (VEO) shall be conducted in accordance with Method 9 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).

Emission Monitoring:

- The Permittee shall conduct a visual check of the baghouse exhaust at least once per week. If any visible emissions are noted, corrective action shall be initiated within 2 hours of the initial observation of visible emissions on order to eliminate the visible emissions (ADEM Admin. Code r. 335-3-16-.05(c))
- Baghouse preventative maintenance inspections shall be performed at least once per quarter. The preventative maintenance shall include, but may not be limited to (ADEM Admin. Code r. 335-3-16-.05(c)):
 - ADEM A Visual inspections of the positive side of the bags through the maintenance port for fallen bags, worn or torn bags;
 - Visual inspections for auger overload;
 - Visual inspections of baghouse doors to ensure proper seals.
- A reading of the differential pressure across the baghouse shall be taken and recorded at least once per day during system operation. Should it be noted that the differential pressure across the baghouse is lower than 3 inches of water, corrective action shall be initiated within 1 hour of discovery to ensure proper operation of the baghouse. (ADEM Admin. Code r. 335-3-16-.05(c))
- To ensure the proper operation of the magnehelic gauge, which provides the baghouse differential pressure readings, maintenance inspections shall be performed at least once per quarter. These quarterly inspections shall include (but may not be limited to) checks of the pressure taps to ensure that there is no plugging/build-up, which would adversely affect the differential pressure reading. (ADEM Admin. Code r. 335-3-16-.05(c))

Cam Analysis:

- CAM does not apply to the No. 2 Lime Kiln Dust Bin with Loadout and Baghouse since this unit does not have the pre-controlled potential to emit particulate matter emissions in quantities greater than the major source threshold.

Recordkeeping and Reporting Requirements:

- Records of all visual checks, Method 9 tests performed, corrective actions taken, and follow-up visual checks shall be maintained in a form suitable for inspection on site for a period of at least 5 years. (ADEM Admin. Code r. 335-3-16-.05(c))
- Records of the pressure drop readings, magnehelic gauge maintenance inspections (and maintenance performed), and any corrective actions taken. These records shall be maintained on site in a form suitable for inspection for a period of at least 5 years. (ADEM Admin. Code r. 335-3-16-.05(c))

No. 1 Lime Kiln Dust Bin with Loadout and Baghouse

Lime kiln dust from the No. 1 Lime Kiln is transferred and stored in the No. 1 Lime Kiln Dust Bin with Loadout. The loadout transports dust into enclosed trucks. The No. 1 Lime Kiln Dust Bin is controlled by a baghouse.

This area is comprised of the following source:

| Emission Point # | Description |
|------------------|--------------------------|
| 008 | No. 1 Lime Kiln Dust Bin |

- This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *“Major Source Operating Permits”*.
- This source is subject to ADEM Admin. Code r. 335-3-4-.04 (1), *“Control of Particulate Emissions for Process industries – General”*.
- This source is subject to ADEM Admin. Code r. 335-3-4-.01 (1), *“Control of Particulate Emissions – Visible Emissions”*.
- This source has enforceable limits in place in order to prevent it from being subject to the provisions of ADEM Admin. Code R. 335-3-14-.04, *“Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”*.

Emission Standards:

- Opacity
 - ADEM Admin Code r. 335-4-.01(1)(a)(b), states no person shall discharge particulate emissions of an opacity greater than that designated as twenty (20%) percent opacity, as determined by a six (6) minute average. During on six (6) minute period a person may discharge into the atmosphere from any source of forty (40%) percent opacity.
- Particulate Matter
 - PM from this source shall not exceed the lesser of the Anti-PSD limit of 0.6 lb/hr as required by ADEM Admin. Code r. 335-3-14-.04

OR

the allowable set by ADEM Admin Code r. 335-3-4-.04(1), which states no person shall cause or permit the emission of particulate matter in excess of the amount for the process weight per hour allocated to such source accomplished by use of the equation:

$$E = 3.59 (P)^{0.62} \text{ (P less than 30 tons per hour)}$$

$$E = 17.31 (P)^{0.16} \text{ (P greater than 30 tons per hour)}$$

Where E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

Expected Emissions:

The maximum expected emissions, per the applications submitted, are as follows:

| Pollutant | Allowable Emissions | | Expected Emissions | |
|-----------|---------------------|-------|--------------------|-------|
| | (lb/hr) | (TPY) | (lb/hr) | (TPY) |
| PM | 0.6 | 2.63 | 0.27 | 1.18 |

Compliance and Performance Test Methods and Procedures:

- Particulate Matter (PM) emissions test shall be conducted in accordance with Method 5 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).
- Visible emission observations (VEO) shall be conducted in accordance with Method 9 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).

Emission Monitoring:

- The Permittee shall conduct a visual check of the baghouse exhaust at least once per week. If any visible emissions are noted, corrective action shall be initiated within 2 hours of the initial observation of visible emissions on order to eliminate the visible emissions (ADEM Admin. Code r. 335-3-16-.05(c))
- Baghouse preventative maintenance inspections shall be performed at least once per quarter. The preventative maintenance shall include, but may not be limited to (ADEM Admin. Code r. 335-3-16-.05(c)):
 - ADEM A Visual inspections of the positive side of the bags through the maintenance port for fallen bags, worn or torn bags;
 - Visual inspections for auger overload;
 - Visual inspections of baghouse doors to ensure proper seals.
- A reading of the differential pressure across the baghouse shall be taken and recorded at least once per day during system operation. Should it be noted that the differential pressure across the baghouse is lower than 3 inches of water, corrective action shall be initiated within 1 hour of discovery to ensure proper operation of the baghouse. (ADEM Admin. Code r. 335-3-16-.05(c))
- To ensure the proper operation of the magnehelic gauge, which provides the baghouse differential pressure readings, maintenance inspections shall be performed at least once per quarter. These quarterly inspections shall include (but may not be limited to) checks of the pressure taps to ensure that there is no plugging/build-up, which would adversely affect the differential pressure reading. (ADEM Admin. Code r. 335-3-16-.05(c))

Cam Analysis:

- CAM does not apply to the No. 1 Lime Kiln Dust Bin with Loadout and Baghouse since this unit does not have the pre-controlled potential to emit particulate matter emissions in quantities greater than the major source threshold.

Recordkeeping and Reporting Requirements:

- Records of all visual checks, Method 9 tests performed, corrective actions taken, and follow-up visual checks shall be maintained in a form suitable for inspection on site for a period of at least 5 years. (ADEM Admin. Code r. 335-3-16-.05(c))
- Records of the pressure drop readings, magnehelic gauge maintenance inspections (and maintenance performed), and any corrective actions taken. These records shall be maintained on site in a form suitable for inspection for a period of at least 5 years. (ADEM Admin. Code r. 335-3-16-.05(c))

No. 1 & No. 2 Lime Systems with Common Baghouse

Additional sizing operations are contained in the No. 1 and No. 2 Lime Systems (010). These systems are used to correctly size the quicklime product for distribution to storage and loadout. The No. 1 Lime System consists of a bucket elevator, sizing screen, conveying equipment and lime silos 4-6 and 9-13, each having a loadout spout. The No. 2 Lime System consists of a bucket elevator, conveying equipment, two sizing screens and lime silos 1-3, 7 and 8, each having a loadout spout. A common baghouse controls the particulate emissions from both systems.

This area is comprised of the following source:

| Emission Point # | Description |
|------------------|----------------------------|
| 010 | No. 1 & No. 2 Lime Systems |

- This source is subject to the applicable requirements of ADEM Admin. Code r. 335-3-16-.03, *“Major Source Operating Permits”*.
- This source is subject to ADEM Admin. Code r. 335-3-4-.04 (1), *“Control of Particulate Emissions for Process industries – General”*.
- This source is subject to ADEM Admin. Code r. 335-3-4-.01 (1), *“Control of Particulate Emissions – Visible Emissions”*.
- This source has enforceable limits in place in order to prevent it from being subject to the provisions of ADEM Admin. Code R. 335-3-14-.04, *“Air Permits Authorizing Construction in Clean Air Areas [Prevention of Significant Deterioration]”*.

Emission Standards:

- Opacity
 - ADEM Admin Code r. 335-4-.01(1)(a)(b), states no person shall discharge particulate emissions of an opacity greater than that designated as twenty (20%) percent opacity, as determined by a six (6) minute average. During on six (6) minute period a person may discharge into the atmosphere from any source of forty (40%) percent opacity.
- Particulate Matter
 - PM from this source shall not exceed the lesser of the Anti-PSD limit of 6.6 lb/hr as required by ADEM Admin. Code r. 335-3-14-.04

OR

the allowable set by ADEM Admin Code r. 335-3-4-.04(1), which states no person shall cause or permit the emission of particulate matter in excess of the amount for the process weight per hour allocated to such source accomplished by use of the equation:

$$E = 3.59 (P)^{0.62} \text{ (P less than 30 tons per hour)}$$

$$E = 17.31 (P)^{0.16} \text{ (P greater than 30 tons per hour)}$$

Where E = Emissions in pounds per hour

P = Process weight per hour in tons per hour

Expected Emissions:

The maximum expected emissions, per the applications submitted, are as follows:

| Pollutant | Allowable Emissions | | Expected Emissions | |
|-----------|---------------------|-------|--------------------|-------|
| | (lb/hr) | (TPY) | (lb/hr) | (TPY) |
| PM | 6.6 | 28.9 | 3.67 | 16.1 |

Compliance and Performance Test Methods and Procedures:

- Particulate Matter (PM) emissions test shall be conducted in accordance with Method 5 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).
- Visible emission observations (VEO) shall be conducted in accordance with Method 9 of 40 CFR 60, Appendix A (ADEM Admin. Code r. 335-3-1-.05).

Emission Monitoring:

- The Permittee shall conduct a visual check of the baghouse exhaust at least once per week. If any visible emissions greater than 15% opacity are noted, corrective action shall be initiated within 2 hours of the initial observation of visible emissions in order to reduce the visible emissions. (ADEM Admin. Code r. 335-3-16-.05(c))
- If during any visual check, visible emissions greater than 15% opacity are noted, the Permittee shall conduct an EPA Reference Method 9 test for a minimum of 12 minutes. If any Method 9 test results in visible emissions greater than 20% opacity, the Permittee shall notify the Department within 24 hours of the Method 9 test. (ADEM Admin. Code r. 335-3-16-.05(c))
- Baghouse preventative maintenance inspections shall be performed at least once per quarter. The preventative maintenance shall include, but may not be limited to (ADEM Admin. Code r. 335-3-16-.05(c)):
 - ADEM A Visual inspections of the positive side of the bags through the maintenance port for fallen bags, worn or torn bags;
 - Visual inspections for auger overload;
 - Visual inspections of baghouse doors to ensure proper seals.
- A reading of the differential pressure across the baghouse shall be taken and recorded at least once per day during system operation. Should it be noted that the differential pressure across the baghouse is lower than 3 inches of water, corrective action shall be initiated within 1 hour of discovery to ensure proper operation of the baghouse. (ADEM Admin. Code r. 335-3-16-.05(c))
- To ensure the proper operation of the magnehelic gauge, which provides the baghouse differential pressure readings, maintenance inspections shall be performed at least once per quarter. These quarterly inspections shall include (but may not be limited to) checks of the pressure taps to ensure that there is no plugging/build-up, which would adversely affect the differential pressure reading. (ADEM Admin. Code r. 335-3-16-.05(c))

Cam Analysis:

- CAM does not apply to the No. 1 & No. 2 Lime Systems since this unit does not have the pre-controlled potential to emit particulate matter emissions in quantities greater than the major source threshold.

Recordkeeping and Reporting Requirements:

- Records of all visual checks, Method 9 tests performed, corrective actions taken, and follow-up visual checks shall be maintained in a form suitable for inspection on site for a period of at least 5 years. (ADEM Admin. Code r. 335-3-16-.05(c))
- Records of the pressure drop readings, magnehelic gauge maintenance inspections (and maintenance performed), and any corrective actions taken. These records shall be maintained on site in a form suitable for inspection for a period of at least 5 years. (ADEM Admin. Code r. 335-3-16-.05(c))

APPENDIX A

Compliance Assurance Monitoring Requirements (CAM)

Compliance Assurance Monitoring Plan for Emission Unit 001 (No. 1 Lime Kiln)

| | Indicator 1 | Indicator 2 | Indicator 3 |
|-------------------------------------|--|--|---|
| I. Indicator | Opacity (Measured with a Continuous Opacity Monitor) | Baghouse and bag conditions are observed through maintenance inspections performed once per quarter. ** | Particulate Matter Emissions Tests (Measured in accordance with EPA Reference Method 5) |
| II. Indicator Range | Opacity should be 20% or less. Inspection of baghouse is prompted if outside this range for more than 5 consecutive 6-minute periods. An excursion exists if opacity (as indicated by the COMS) exceeds more than one 6-minute average of 20% in 1 hour and/or any 6-minute average of 40% opacity. * | Range is exceeded if failure to perform inspections or take action following report of necessary maintenance. | $E = 3.59(P)^{0.62}$ $P < 30 \text{ TPH}$ $E = 17.31(P)^{0.16}$ $P \geq 30 \text{ TPH}$ An excursion exists if a Method 5 test results in emissions greater than that allowed by the appropriate Process Weight Equation as stated above. |
| III. Performance Criteria | | | |
| A. Data Representativeness | The COM is located at the baghouse outlet. The system has a minimum accuracy of 2% over the range of the monitor. | Not Applicable | The Method 5 is performed as prescribed in Appendix A of 40 CFR Part 60. |
| B. Verification of Operation Status | Not Applicable | Not Applicable | Not Applicable |
| C. QA/QC Practices & Criteria | Calibrate and maintain in accordance with manufacturer's specification and 40 CFR 60.13 and 40 CFR 60, Appendix B, Performance Specification I requirements. | Personnel will be trained properly to perform inspections and maintenance and recognize excursions and initiate corrective action. | The Method 5 is performed as prescribed in Appendix A of 40 CFR Part 60. |
| | Indicator 1 | Indicator 2 | Indicator 3 |

| | | | |
|--|---|--|--|
| <p>D. Monitoring Frequency</p> <p>Data Collection Procedures</p> <p>Averaging Period</p> | <p>Continuously recorded on strip charts or electronically</p> <p>6-minute averages</p> | <p>At least once per quarter</p> <p>Not Applicable</p> | <p>The Method 5 test shall be performed at least once per year. Consecutive tests shall not be conducted less than 6 months or more than 18 months apart. The Method 5 is performed as prescribed in Appendix A of 40 CFR Part 60.</p> <p>3-hour average</p> |
|--|---|--|--|

* Should the net opacity exceedances exceed 5%, as determined by the COMS, during any calendar quarter, the Department may require additional particulate matter emissions testing to be conducted prior to the end of the next calendar quarter.

** Quarterly Control Device Inspections Include (But May Not Be Limited To):

- Visual inspection of the positive side of the bags through the maintenance port for fallen bags
- Worn or torn bags
- Auger overload
- Inspection of baghouse doors to ensure properly sealed doors

Compliance Assurance Monitoring Plan for Emission Unit 005 (No. 2 Lime Kiln)

| | Indicator 1 | Indicator 2 | Indicator 3 |
|-------------------------------------|--|---|--|
| I. Indicator | Opacity (Measured with a Continuous Opacity Monitor) | Baghouse and bag conditions are observed through maintenance inspections performed once per quarter. ** | Particulate Matter Emissions Tests (Measured in accordance with EPA Reference Method 5) |
| II. Indicator Range | Opacity should be 15% or less. Inspection of baghouse is prompted if outside this range for more than 5 consecutive 6-minute periods. An excursion exists if opacity (as indicated by the COMS) exceeds more than one 6-minute average of 15%. * | Range is exceeded if failure to perform inspections or take action following report of necessary maintenance. | 0.6 lb/ton of feed 0.02 gr/acf 25.71 lb/hr An excursion exists if a Method 5 test results in emissions greater than any of the limits listed above. |
| III. Performance Criteria | | | |
| A. Data Representativeness | The COM is located at the baghouse outlet. The system has a minimum accuracy of 2% over the range of the monitor. | Not Applicable | The Method 5 is performed as prescribed in Appendix A of 40 CFR Part 60. |
| B. Verification of Operation Status | Not Applicable | Not Applicable | Not Applicable |
| C. QA/QC Practices & Criteria | Calibrate and maintain in accordance with manufacturer's specification and 40 CFR 60.13 and 40 CFR 60, Appendix B, Performance Specification I requirements. | Personnel will be trained properly to perform inspections and maintenance. Operators will be trained properly to recognize excursions and initiate corrective action. | The Method 5 is performed as prescribed in Appendix A of 40 CFR Part 60. |
| | Indicator 1 | Indicator 2 | Indicator 3 |

| | | | |
|--|---|--|--|
| <p>D. Monitoring Frequency</p> <p>Data Collection Procedures</p> <p>Averaging Period</p> | <p>Continuously recorded on strip charts or electronically</p> <p>6-minute averages</p> | <p>At least once per quarter</p> <p>Not Applicable</p> | <p>The Method 5 test shall be performed at least once per year. Consecutive tests shall not be conducted less than 6 months or more than 18 months apart. The Method 5 is performed as prescribed in Appendix A of 40 CFR Part 60.</p> <p>3-hour average</p> |
|--|---|--|--|

* Should the net opacity exceedances exceed 5%, as determined by the COMS, during any calendar quarter, the Department may require additional particulate matter emissions testing to be conducted prior to the end of the next calendar quarter.

** Quarterly Control Device Inspections Include (But May Not Be Limited To):

- Visual inspection of the positive side of the bags through the maintenance port for fallen bags
- Worn or torn bags
- Auger overload
- Inspection of baghouse doors to ensure properly sealed doors